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GEELONG NATURALIST

JORNAL OF THE GEELONG FIELD NATURALISTS CLUB INC.

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16 NOV 1990

G.F.N.C.
P.O. Box 1047, Geelong

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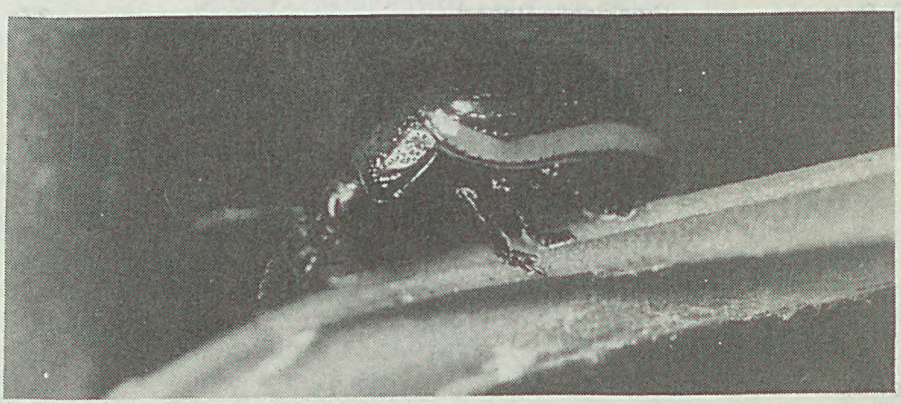
Editorial

The Boneseed Beetle has finally been released at the You Yangs (see Ken McGough's article). Whether it will be successful in contolling boneseed, Monolifera chyrsanthemoides, the noxious weed the members of the Club have worked so hard to eradicate, remains to be seen. Eggs will be released at fortnightly intervals over the next few months. The second release was of 7000 eggs, all potential chewers of buds and leaves. It could take up to two years before any significant results are achieved.

What then of the GFNC project at the You Yangs? Even if it becomes evident that it is no longer worth our while hand-pulling boneseed, there are plenty of other projects worthy of our efforts. At the September meeting of the Club David Corke showed photos of the You Yangs in the 1940's and one of the places he mentioned as an outstanding bird area is one that has since been degraded by gravel extraction and is now ready for regeneration. It would be exciting to 'adopt' it and restore it to some of its former glory. We would work closely of course with the Department of Conservation and Environment which has the final control over the area.

The Belmont Common also has wetlands deserving of our attention, apart from the area we currently "rent". We have recently produced an attractive brochure about the Common and its birdlife. If you require copies for distribution please contact the Committee. The bird hide near the entrance to the golf course is a comfortable place to sit with your binoculars and I would also recommend you take a walk to less accessible parts of the Common to discover more of its charms.

Valda Dedman



Black Boneseed Beetle
Photo: Trevor Pescott

THE SEVENTH TREE

by L. Lane

Let's go down the ramp at the northern end of Princes bridge, Highton, to locate Foster Fyans' cairn in Balyang Park, then strike south to the brink of Barwon River. There we will find the first *Eucalyptus camaldulensis* east of the bridge span. This looks almost like two trees for it has been lightning-riven and has produced twin trunks almost directly from the root-stock.

Moving easterly, we observe two fine specimens of red gum, very upright and with flourishing canopies, dynamically balanced. The fourth tree is rooted very near the bank and it leans as though looking at its own reflection in the river. This is the nature of river red gums which thrive best when their roots are adjacent to a stream. They like their feet in water.

The fifth is also a leaner and its trunk is really interesting. This tree is rooted on the lower, sandy terrace among the common reeds *(Phragmites communis).*

The sixth tree is relatively young with a slimmer, sinuous trunk. Its canopy is sparse. It has probably been affected by the salty water released into the Barwon from the Colac Lake overflow. Such saline water does not suit the riverine forest trees.

The seventh along our way is remarkable for it has a row of scars where the bark has been carved by indigenous Australian inhabitants to provide a "ladderway" to climb the trunk into the branches so that a sentry could survey the surrounding landscape. Tribespeople called such a row of toeholes after the constellation Serpentarius.

The lowest toehole was created about 50 cm. from the ground; the second 55 cm. higher. The scars are circular, now, looking a little like hand-stitched eyelets. The third, about 55 cm. higher again, which gave the climber access to the lowest branch, is different because it has been enlarged by possums (or phalangers) which gnawed the cortex so they could extract sweet sap from the cambium layer of the wood. Above the lowest crook, where the branch bifurcates from the trunk, are two more toehole-scars (rungs of the ladder). These are also about half a metre apart.

The original designer of the "staircase" splintered the cortex with the blade of a polished axe (probably made of Ceres epidiorite, commonly called greenstone, then prised the outer bark away from the slippery growing-layer with the aid of the pointed haft of the hatchet or the stone blade set in the end of a digging stick. The lower edge of the original split was levered outward, providing a small "sill". Onto this ledge, the climber placed his great toe and hoisted himself from the ground. He then threw a supple-jack made from the stems of some creeper, like the "running postman" *(Kennedia prostrata)* around the tree over head height. The ends of the "rope" were tied in the small of his back and, balan-

ced on one toe, he was able to lean back on this support. Cutting other toe-holes in the same manner, he elevated himself, step by step, hitching the supple-jack up each time until he reached a crotch into which he could climb.

Under the seventh tree is a plant I would like you to view. I have it on good authority that this is not often seen along the Barwon near Geelong; yet here is a thicket of Downy Dodder-Laurel *(Cassytha pubescens)* so called because the flower-buds and their short stalks (which were first observed in May) are covered with fuzzy hairs).

This curious plant consists entirely of suckers, stems and tendrils. When a tendril comes in contact with another plant, it wraps itself round, clockwise. Under our toe-hole tree, it has draped itself over reeds and lignum (*Meulenbeckia cunninghamii)* alike and is strangling them.

Dodder-laurels are leafless parasites with wiry stems which attach themselves to living shrubs with small suckers, properly called haustoria. Their stems are sensitive to contact. They twine and clasp the support tightly though they rarely set more than three loops around the same branch. At the points of loosest contact haustori develop. These penentrate the tissues of the host plant, growing in organic union with them and drawing off all the food the parasite needs. Dodder-Laurels have no green tissue of their own. The leaves are replaced with small scales.

In spring, along its bronze-green stems it throws out tiny, creamy white flowers on abbreviated stalks. The flowers are inconspicuous, being not more than 2mm. across, besides which they do not fully open but remain furled.

The color of Dodder-laurel is distinctive - quite different from the rest of the understorey vegetation. The fresh stems and tendrils were formerly relished by Aboriginal diners who cooked selected portions in ashes at the fireside as an accompaniment to the meat course for supper.

At the time of writing, I am all agog to see what the fruits are like when they develop. The seeds of this parasite germinate later than that of the host plant. The seedling outs down a very short anchor-root. The bare stem nutates in search of its own host and, as soon as it has firmly clasped one and put out suckers, its original root perishes because the plant can feed directly from the other organism. It becomes entirely dependent upon its host.

The twining action of the yellowish stem is even triggered when a tendril meets one of its own stems. You will observe a great mass of stringy, brown, dead Dodder-laurel over part of a small trunk nearby. The Dodder finally killed itself, for, when the plant from which it steals its nourishment expires, so must the thief.

Now I wonder who noticed a feature of the variegated bark (fawn, grey and brown) on the trunk of the fifth tree? Quite right! It has climbing-notches along its northern side. But, if you looked closely, you would see that these differed from

Stem, woolly bud-clusters and tendrill of the Downy Dodder-laurel. Twice life-size.

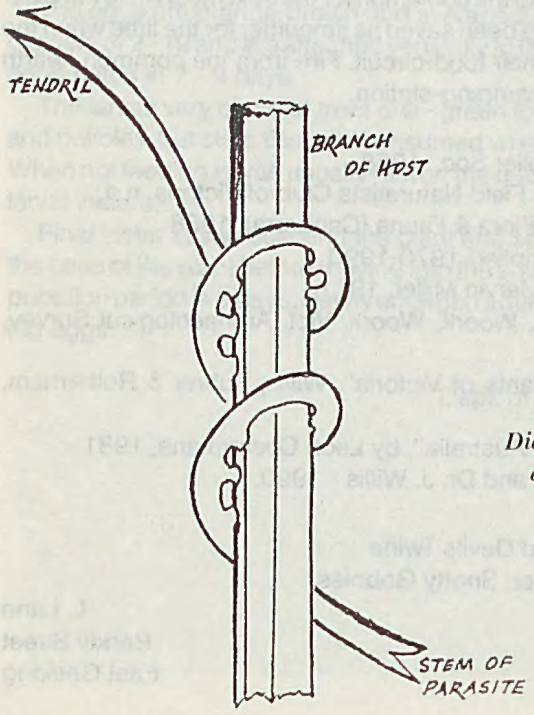


Diagram of coils, haustoria and nutating tendrill. Twice life-size.

the eyelet-like marks where the bark had healed round the wound after the outer layer had been levered from the growing-layer of the tree-trunk. These scars (on number five red gum) have been made with a steel tool. You can see where the blade penetrated the heartwood. The bark has not adhered to the cambium-layer, making a gathered, circular scar.

The lowest toe-hole, here, is 80 cm. from the ground. The second is 60 cm. above, yet it is not proper alignment; while the next elevates the climber for only 40 centimetres bringing him directly above the first notch. From this position, the climber could gain the crotch of the tree. Someone has nailed several horizontal, wooden cleats up a branch which juts out over the water and intrepid swimmers plunge into the river from this high vantage point. It is the writer's opinion that a European made this stairway-up-a-gum-tree. Of course, the lower bark-wounds could have been made by some Aboriginal person who somehow acquired one of these woundrous steel cutting tools which most lucky colonists seemed to own. But, the irregularity of the three "steps" incline the writer to suppose that a white person created them.

By the way, had you been an Aboriginal forager, your eye would have been caught by the nice, fresh shelf-fungus upon the southern side of tree eight. The new growth would have gone into the coolamon for the next meal while the older portion of the fungus would have been saved as smoulder for the time when the clan moved to the next leg of their food-circuit. Fire from the common hearth would be carried to their next camping-station.

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Addendum

Cassytha glabella is nicknamed Devils Twine
Cassytha melanthe is nicknamed Snotty Gobbles.

L. Lane
Barkly Street
East Geelong

Black Boneseed Beetle

by Ken McGough

The first insect for the biological control of boneseed has been released in the You Yangs. It is the black boneseed beetle (Chrysolina progressa). The first release consisted of about 270 adult beetles, a few hundred larvae and over a thousand eggs.

Great hopes are held for the success of the insect because the climate in the You Yangs is a very close match with the area in South Africa where the original beetles were collected. The quality of the food source is excellent and the quantity (unfortunately!!!) is ample.

The adult form of the beetle has smooth, shiny - black elytra with a narrow white band along the lower margin. The head, thorax and legs are also black. Adults average 7.5 mm in length and females are slightly longer than the males. The beetles feed and shelter usually on the upper canopy. They damage leaves and stems are capable of causing severe defoliation. Under laboratory conditions, the adults may live for 14 months.

The eggs are orange-brown and average 2.2mm on length. They are laid in clusters of 2 - 19 and are attached vertically to the undersides of leaves. At 22°C, eggs hatch in 7 - 9 days.

The larvae vary on color from dull - green to black. They feed on leaf blades and petioles, but stem tissue is consumed when foilage is not readily available. When not feeding larvae usually rest on the undersides of leaves. There are four larval instars.

Final instar larvae descend the plant and spend a short period resting near the base of the plant before moving into the soil to pupate. At 22°C, the average pupation period is 8 days. Newly emerged adults feed for 2 -3 weeks before laying eggs.

Ken McGough
Dept. of Conservation and Environment
State Offices
Geelong, 3220

The Hermit Spider

by Dean Hewish and Marilyn Hewish

Field naturalists visiting the sea shore regularly are all familiar with hermit crabs, but what about hermit spiders?

One of us (D.H.) was standing in our backyard on the 24th March this year, contemplating the unmown grass (calling it a lawn might be stretching the definition). In a sheltered spot between the tank stand and the glasshouse was the shell of a garden snail (Helix aspersa), about 2 cm in diameter, apparently leviating about 40 cm off the ground. Garden snails are not noted aviators, and closer inspection was in order. This showed that the shell was actually suspended from grass stems by fine spider web and that the spider was present in the aperture of the shell. The spider appeared to be a leaf-rolling spider (Phonognatha Graeffi, identified from Main (1976)) and was about 2 cm long (see photograph). Spiders of that type are prevalent in our backyard and seem to be particularly noticeable in Autumn. The next morning the shell was missing from where it was first noticed, but it was discovered in grass about one metre away, suspended at approximately the same height. It was still occupied by the same spider*. Discussion with Trevor Pescott confirmed that leaf rolling spiders use snail shells on occasions, but he had not heard of one moving its shell to a new location. The shell and spider were still in the second site when we returned from holidays on 29th April but it was moved about 30 cm to another grass stem shortly after that. The shell was empty when we finally became motivated to cut the grass on the 20th May.

Backyard naturalists who also dislike mowing grass could keep a look-out for such hermit spiders, and particularly note whether they move their shells.

* From the size, thickness and color of the shell and the size of the spider, we are sure that they were the same ones seen the day before.

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Main, B.Y, (1976), Spiders, Collins, Sydney.

Dean Hewish
Marilyn Hewish
74 Wellington St.,
Bacchus Marsh, Vic.

Leaf-rolling spider in snail shell

Report of talk at General Meeting Nov. 1989 given by Judy Barker on the topic of Australian Asteraceae (cont.)

by Roy Whiteside

Fruits

Fruits of all Asteraceae are achenes (i.e. dry, one seeded fruits)

The three main genera which the Daisy Group have started to study Brachyscome, Helipterum and Helichrysum. Classification is mainly done on the basis of the achenes.

The Brachyscomes have small seeds but each species has a different seed structure and identification of this species is done entirely on the nature of the achenes.

Four different types of Brachyscomes were shown to illustrate the differences in the achenes. The features to look for are the presence or absence of a pappus, whether it is feathery of barbed, the shape size and color of the achene and whether its body is smooth, warted or winged. The types illustrated were: B. Iberidifolia (Swan River Daisy)

B. Multifida (Cut-leaf Daisy) which has black achenes with bumps.

B. heterodonta (Golden Daisy) which has a wing-like achene looking like a "monster"

B. aculeata (Hill Daisy)

Both Helipterums and Helichrysums have everlasting flowers but the former have a feathery pappus and the latter have a barbed pappus but sometimes with feathery tips. (A pappus is a tuft of hairs, bristles or scales at the base of a seed).

Examples of some Study Group activities:-

Two species of Brachyscome heterodonta are being studied which are supposed to be the same. One is from the Werribee area and the other from Ulupna Island on the Murray near Strathmerton. Philip Short at the Herbarium has identified this plant as Brachyscome chrysaglossa as originally named by Ferdinand Von Mueller.

A picture of Helipterum albicans was shown to illustrate the jelly which forms on the outside when Helipterums and Cephalipterums are wetted. The jelly stops these seeds from blowing away and stiff hairs in the seeds anchor them into the potting mix. Seeds should not be covered as they need light for germination. It is important to wet the seeds every day with a fine spray and Autumn appears to be the best time for germination in the Melbourne area.

In western NSW near Lake Cargeligo Helipterum diffusum (Ascending Sunray) has been found growing in cracked clay soil. It can be grown from seed and is one of the first annuals to come out in the Melbourne area and the flowers are good for display purposes.

Brachyscome diversifolia var. diversifolia is a plant which grows close to the shore on clay soil at Urquarts Bluff. It has been grown from seed and is a pleasing basket subject.

Study group leader Esma Salkin has a project on Helipterum anthemoides (Chamomile Sunray). About nine forms of this widely distributed plant have been grown. For example, there is an alpine one which is tufted, has stems that are not branched and has pointed bracts and blooms in spring. Another one has branches and flowers with red buds and blooms in the winter.

B. mulleroides is a rare and endangered species on Ulupna Island. Seed has been obtained and has been stored so that this plant can be grown and replaced if it should disappear from the Island.

Helichrysum obtusifolium (Blunt Everlasting) which grows in the Anglesea area is normally difficult to germinate. it does well after a fire. To propagate this, it can be put through a mulcher with small twigs (about 1 cm in diameter) and then heated for half an hour in a baking dish at a temperature of 170 degrees Celsius. This treatment is followed by soaking in water for 24 hours. The improvement in germination is thought to be due to the production if a hemicellulose material which is soapy in nature and has the texture of Cooper's beer!

Helichrysm obtusifolia has brown buds which Judy tries to propogate from cuttings.

Some local daisies

Helichrysum baxteri (Fringed Everlasting) has brown buds and white bracts with feathery margins which are easy to see with a magnifying glass.
It is found off Forest Road near Anglesea and was identified by Dr. Jim Willis. In recent times, red-budded ones have been found by Mary White.

Helichrysum scorpioides is one of the local daisies found at Fairhaven.

Brachyscome uliginosa grows in the Brisbane Ranges.

Most daisies near the coast are either perennials, shrubs or small trees like Oleaia lirata (Snowy Daisy-bush).
Leptorhyncos squamatus and L. linearis grow in Angahook State Park but have different buds, green in the former and shiny brown buds and outer bracts in the latter.

There are about five varieties of Senecio lautus and a sub-species maritimus grows at Eastern View on the rocks.

Olearia teretifolia (Cypress Daisy-bush) flowers in late spring in the Anglesea area.
O. myrsinoides (Silky Daisy-bush) is a club-shaped shrub which grows along the roadside in Angahook State Park.
O. pannosa (Velvet Daisy-bush) is a shrub which grows along the Point Addis Road where seedlings reappeared after the Ash Wednesday fire of 1983.

Velvet Daisy Bush – Oleania pannosa

Photo: Trevor Pescott

PRESIDENTS REPORT 1989/90

It gives me great pleasure to present this report for the 1989/90 Club year.

Our change of venue this year, to new club rooms at 'Karingal' Community Centre, has been a positive move. We now have improved facilities for our library, speaker system, storage of equipment, supper service, and very importantly, a warmer and more friendly meeting place.

Our Club has experienced a very successful year due to the participation of so many members in all facets of Club life - the work, as well as the meetings and excursion activities.

ORGANIZATIONAL STRUCTURE: In June 1989 the Club approved an organizational structure plan for 1989/90, to be reviewed in twelve months. This structure outlines the communication lines and responsibilities of various office-bearers of the Club and was drawn up to spread the work load more evenly over Committee and other Club members. Duty rosters were drawn up for the regular routine jobs of setting up the hall, supper, and library duties. There has been great co-operation from members, and I urge all members to become involved to a greater or lesser extent, as they are able, to add to their feeling of belonging to 'their' club.

MEMBERSHIP: Our membership figures at March 6th 1990 stand at 200 financial membership 'units' of whom 17 are subscribers only (to the magazine and newsletter), and 50 are 'joint/family' units representing at least two members. We have had eight resignations and 19 new memberships over the year. We are most grateful to our membership officer who has developed a very efficient computerized membership listing with the facility to produce address labels, statistics, and other data at the 'touch of a button'.

We are concerned at the high number of unfinancial members (35) at March 1990. This coming year we are endeavouring to circulate our subscription renewal notices more promptly to minimize late renewals.

LIFE MEMBERSHIPS: This year we have acknowledged the great contribution made to our club by three of our long standing members. Rolf Baldwin, Gordon McCarthy and Leila Ramsay were elected to Honorary Life Membership. Rolf and Gordon are both foundation members of the Club from 1961, and Leila has been a member since 1968.

SUBSCRIPTION RATES: Subscription rates for 1989/90 were as follows: Ordinary member $15, joint/family $23, junior/student $5, corporate $25, subscriber to magazine only $15. Subscription rates for 1990/91 were set earlier this year, in February, to enable earlier distribution of subscription renewal forms - and hopefully - a more prompt receipt of dues!

GENERAL MEETINGS AND EXCURSIONS: We are fortunate to have had such excellent speakers at our General Meetings, and such an interesting variety of excursion activities, including a set 'Junior Group' program. These are listed on our annual Club Program and need no repetition. Our sincere thanks to everyone involved on making our Club activities so interesting, enjoyable and educational.

VFNCA/WVFNCA CAMPOUT: This year Geelong FNC again hosted the combined Victorian Field Naturalists Association and Western Victoria Field Naturalist Association Campout. This combined weekend incorporated the Annual General Meeting of the VFNCA and the quarterly meeting of the WVFNCA. A variety of sea and land based excursions were arranged, with excellent speakers in the evenings. Robert Burn, a recognised authority of opisthabranchs and nudibranchs (gastropods including sea hares and sea slugs) spoke on this subject, illustrating his talk with beautiful slides. Dr. Kerry Black, an oceanographer with the Victorian Institue of Marine Sciences, spoke on the tidal effects on the Victorian coastline. On the third evening we enjoyed short informative presentations from various member clubs. Fourteen clubs and approximately 150 members took part on various aspects of this very successful weekend.

SUB COMMITTEES:

Program Sub-Committee: this sub committee was formed to enable the general planning of the program to take place over the year, as suitable speakers and excursion sites come to light, and thus relieve the pressure on the President and others early in the year. The program Co-ordinator is tied to the position of Vice President and so will change at least each two years. The Immediate Past Presi-

dent and at least one other co-opted club member make up the sub committee. Information is continually sought from members on their suggestions for speakers and excursions for the coming year. Members are asked to give their ideas to the Program Co-ordinator at any time.

Publicity Sub-committee: this sub committee was formed the meet the on going publicity needs of the Club – if we are to grow and thrive we must be known! Members of this sub-committee are the President, Secretary and leaders of each of our 'groups' – Bird, Plant, Junior, Conservation – with co-opted members as required.

We are presently seeking company sponsorship for quality display boards, and have been communicating with the Geelong Regional Library to present illustrated talks to library user groups – schools, clubs, etc. We plan our first presentations for Spring 1990.

Conservation Sub-committee: this sub-committee is headed by a convenor, and made up of co-opted members with expertise relating to a particular issue. The sub-committee investigates issues and prepares submissions that cannot be handled at committee meetings.

Fund Raising Working Party: the President, Immediate Past President, and Treasurer, earlier this year, looked into the issue of permanent find raising for our Club, to make up our budget short fall. Our printing costs were a major concern. The adopted recommendations of the working party were that the Club cannot budget for a shortfall to made up by find raising., and that our expenditure must be rationalized to fall within our budget. Small fund raising activities involving little time and preparation e.g. raffles, sale of books, etc. are acceptable and should be accepted as a bonus.

Magazine/Newsletter Review Working Party: a working party was formed to review the role, format, postage policy, cost and efficiency of Club magazine and newsletter. The President, Treasurer, Magazine Editor, Newsletter Editor, and interested committee members made up the working party. Following a number of investigations into various formats and production methods and costs, the adopted recommendations were: to continue with the present format, limiting the magazine to 24 pages per issue, and to seek company sponsorship and limited advertising for the magazine. A future goal is to distribute the newsletter to all members the week prior to the General Meeting, as a means of keeping members informed, and improving member participation in activities.

CONSERVATION ACTIVITIES: The committee responds to many and varied conservation issues affecting our local environment. Those members who have perused the "Outwards Correspondence" on the notice board at meetings would be aware of this fact. In the way of field work, members have again taken part in two boneseed 'pulls' at the You Yangs as part of the Club's continuing effort to restore our project area to its natural flora.

The Club has also undertaken three afternoon surveys of flora along the Bellarine Peninsula Railway Reserve between Anderson's Road and Swan Bay Road. Many species of indigenous flora were recorded last Spring. This is to be followed up by a meeting with the various authorities concerned, to hopefully conserve as much as possible of the indigenous flora, which in itself is a tourist attraction.

PUBLICATIONS: Our book from "Buckleys to the Break" is causing some concern, as sales are moving very slowly and we have almost half our original stock still to be sold. The Committee is considering means of selling the remainder of the stock while still covering our costs.

A wetlands brochure on the Belmont Common is nearing completion.

We are looking at revising some of the information in our little booklet "The Care of Sick, Injured and Orphaned Birds and Animals", to ensure it is up to date. This publication by the late Jack Wheeler has been a great fund raiser for the Club.

REPORTS: I thank Group Leaders and our Librarian for their reports which follow, and our Treasurer whose report is presented separately.

IN CONCLUSION: my sincere thanks to all Club members for your support and contribution to the Club over the year. So many people help in so many ways. Remember this is your club, we need your involvement, and - we need you to bring along a new member! I look forward to another happy and successful year on 1990/91, with the continuing, and increasing, participation of Club members in all aspects of Club activities.

Diana Primrose
President

Conservation Sub-Committee Report

The main issues dealt with were:

1 Comments on the 'Draft plan for the protection and development of Port Phillip and Corio Bay' were compiled by Les Barrow and dealt mainly with the Corio Bay region.

2. An inspection and study was made relating to the 'Concept plan for the area owned by ANCO Seed and Turf P/L, Newtown'. The main objections related to the excavation of an area downstream, the erection of a board walk, and canoe storage close to the river.

3. An inspection of the site and the proposed plans for a restaurant development at Barwon Heads Caravan Park was made, and it was considered there would be a minimal effect on the environment in that vicinity.

4. Comments were submitted on the Buckleys Falls Project (dated January 1990) following a study of the document by T. Pescott.

5. Comments on a draft management plan for Inverleigh Flora and Fauna Reserve were submitted to CF&L Geelong. The main objections related to controlled burning in Spring or continuation of bee licences, and continuation of the tip site.

6. Objections were made to the Ministry of Planning & Environment in January 1990 with regard to sub-division and development proposals on land between Anglesea and Airey's Inlet adjacent to the Great Ocean Road. A Committee had been formed under the chairmanship of Hon. Rod McKenzie which has been meeting on a monthly basis since March 1990. It is hoped that the land can be acquired by the Crown if appropriate funds can be raised.

R.S. Whiteside
Convenor April 1990

Bird Group

Guest speakers included Roger Hicks - Birds of New Guinea, Xennia Dennet - Flame Robins, Stephen Ambrose from the R.A.O.U., Danny Rogers - his investigations into the origin of the famous Coonawwaa feather, Ellen McCulloch from the B.O.C. – 'Birds in Gardens' survey and 'Yellow tailed Black Cockatoo' survey. Peter Menkhorst – Mud Islands, John Starks – Little Tern, Pauline Reilly – her study into the bird life of Aireys Inlet since the Ash Wednesday wildfire of 1983.

Excursions were made to Ironbark Basin, the You Yangs, and Eastern Park. Bird Group members took part in the Wader Count in July, and the Annual Challenge Bird Count in December.

Plant Group Report

Plant Group activities always seem to be an enjoyable informative experience for the LEARNED as well as the LEARNERS. The LEARNED would have you believe they are not, but the collective fund of knowledge which they readily share proves otherwise. Hopefully with time - some need lots of it - the LEARNERS will become LEARNED and allow the process to continue ad infinitum.

Typically, one of our own plant group members leads a discussion on some botanical matter at our meetings when a particular genus, plant identification of a plant community would be the topic.

On other occasions we have learnt about Native Herbs - Don and Dot Francis, Eucalypts and their habitat - Rolf Baldwin, Fungi - Gordon McCarthy, and we especially thank them for their presentations.

Out in the bush is the place - orchids at Stieglitz, ferns at Beech Forest, and springtime at Barwon Downs with John James - excursions were the highlights of our years program.

Which Plant Group activity on next year's program interests you? Come and join us, you will be most welcome.

Dick Southcombe

Juniors Group Report

The Juniors Group has had a successful year with fairly good attendances at most activities.

An encouraging sign is that junior membership has increased as a result of the hands-on approach to the activities. It was also good to see contributions made to the magazine by one of our junior members Sarah McKenzie. Well done Sarah, keep up the good work.

Activities covered this year included Beach walks looking for Seabirds, Spotlighting and Mammal survey techniques were displayed at Anglesea. The two most popular outings were the trip to Serendip where we were given a tour of the sanctuary, and the trip to the Batesford Quarry in search of fossils.

It is disappointing that junior activities are not well attended by club members as I feel the group would benefit greatly from an input by other experienced club naturalists. It is appropriate here to thank Ray Baverstock and Lawrie Conole for the continuing support in running the group's activities.

The Juniors Group looks forward to another successful and interesting year, and judging by the interest and knowledge displayed at the outings, it will not be too many more years before we have other contributions to the magazine by junior members.

Grant Baverstock

Librarian's Report

After twelve months in our new meeting place at Karingal, I am sure everyone appreciates the better accessibility of library books. It is now possible to display material such as Annual Reports, Flora and Fauna Surveys, Ministerial Statements, L.C.C., G.E.C., C.C.F. publications, etc., which previously had to be kept in storage cabinets in various places because there was no room for them on library shelves.

Our former lock-up book cupboard, so beautifully made by Graham Tribe to whom we owe thanks also for these present shelves, is in the store room being used for old material.

Thanks to many generous donors our book collection has increased by several dozen this year and we have an ever increasing number of periodicals which keep interesting and up-to-date items coming in.

I would like to draw new members' attention to the library facilities here for their use, and also remind long-standing members of all the interesting material here of which they may avail themselves.

People to whom I owe thanks for help over this, my first year in this position - Leila Ramsay, former Librarian who with her many years experience of running the library so well in frustratingly cramped conditions, is a great back-stop with her wide book knowledge. Dick Southcombe, committee, librarian liaison officer is always helpful with problem solving and innovative ideas. Cecily Lawrie for her up-to-date library note which appear regularly in the newsletter. Val Dedman for her never ending task of looking after the code numbering system. A big thank you to the half dozen rostered helpers one of whom assists at the table each month.

Finally, unfortunately, I must mention that there are still several outstanding missing books, so please could everyone check just in case there might be a forgotten book gathering dust in some corner of your bookshelves.

Thank you all.

Betty Moore

Treasurer's Report

I am pleased to present this report for the year ending 23/2/90. Overall membership declined from 205 units at the same time last year to 203 this year even though we welcomed 19 new members during the year.

Subscriptions last year amounted to $3093. This year subscriptions totalled $3641 of which $211 was paid in advance.

For some time our printing and postage costs have exceeded income from subscriptions and if this trend had been allowed to continue unchecked, our reserve funds would soon have been exhausted.

Various options were examined by the Magazine/Newsletter Review. The least costly option is to continue with four issues per annum but restrict the size to 24 pages per issue. This allows us to reduce printing costs to a sustainable level and to also still take advantage of reduced postal rates even though postal regulations were recently amended. Further savings in postal charges can be made by making our newsletter a registered publication under these regulations.

It has still been necessary to make a small increase in most categories of subscriptions for the coming year 1990/91. These rates are $25 Corporate Membership, $24 Family Membership. $16 Ordinary Membership. $4 Junior Membership, $16 Magazine Subscription Only and postage of Newsletter $8.

This year the income from the booklet "The Care of Sick, Injured and Orphaned Birds and Animals" by the late Jack Wheeler amounted to $388.39. Our thanks go to Mrs. Shirley Southcombe who supervises the distribution of this booklet. The text of the booklet is now being revised and updated and it is hoped a new edition will shortly be available.

Sales of our publication "From Buckleys to the Break" totalled $1078.24 largely due to the efforts of Mrs. Valda Dedman. We thank Valda for her work on the distribution of this book. Our budget for the coming year relies heavily on the sale of a large number of these books, and as over 500 remain to be sold we seek the assistance of members in disposing of this publication.

Once again the club is grateful to the City of South Barwon for a grant of $374.00 from its recreational voucher scheme.

A donation of $100 was received from the Gould League of Victoria in appreciation of the help given by some of our members at a field day held at Balyang Sanctuary.

Appeals which we supported included the Australian Natural History Medallion Trust $20, The Bird Observers Club appeal for a memorial to the late Mr. Roy Wheeler $20, The Australian Conservation Foundation for its Greenhouse Effect and Cape York appeals $40 and the Australian Bird Environment Fund $50

Subscriptions to other clubs and organisations totalled $370.

Following incorporation of the club our accounting reports this year have been drawn up in the format suggested under the Associations Incorporated Act 1981. These reports give a clearer view of the club's income and matching expenditure for the year. A list of assets and liabilities has been drawn up and members are welcome to view any of the financial records if they so desire.

The total funds balance as at 23/2/90 shows a cash surplus of $340.68 compared to last year, but if amounts outstanding for printing, rental, etc. are taken into account there is an estimated deficit of $2204.32 for the year.

Part of this deficit is due to certain non-recurring expenses associated with our relocation to the Karingal Community Centre. These include $361.85 for library cupboards and $394.00 for the purchase of chairs.

An estimated expenditure of $945.00 for the wetlands brochure relates to a previous accounting period in which a government grant of $1200 was received. ($255 was paid for illustrations in the brochure during this financial year)

With conservation and environmental issues having a high profile at the moment members are urged to encourage others to join our club. With a stronger membership base our club will be able to provide better services for our members, and also enable us to support other worthy conservation appeals. Our financial position only allows us to give token support to these appeals.

It also helps the treasurer if members pay their subscriptions early.

I would like to thank our membership officer Mr. Alban Lloyd-Jones who has helped to make my task much easier. The regular up-dated computer listings of members and other statistical data produced by Alban have been invaluable.

Sincere thanks to also to Mrs. Betty King who typed the financial reports.

Our thanks also go to Mr. David Burton who has again audited our financial records this year.

Ray Baverstock
Honorary Treasurer

Receipts & Payments Account for Year Ending 22/2/90

Receipts		Payments	
Subscriptions	3641.00	Printing and typing	3515.54
Grants, donations	607.08	Stationery	277.67
Sales -		Postage	591.13
"Buckleys to Break"	1078.24	Hall rental	410.00
Sales - "Sick & Injured	388.39	Subscriptions to clubs	370.00
Excursions	535.74	Donations	155.00
Sales - Club badges	19.20	Library purchases	152.90
Fund raising	95.00	Publications for re-sale	759.75
Re-sale of publications	806.90	Travelling expenses -	
Bank interest	20.54	Speakers	40.00
Coffee sales	40.03	Repairs & maintenance	58.30
Sundries	29.47	Equipment purchases	127.68
	7261.59	Furniture, fixtures & fittings	755.85
Transfer from ANZ Common Fund V2	2000.00	Excursions	504.00
	9261.59	Insurance	462.31
		Deposit - Stuart Mill Camp-out	50.00
		Fund raising expenses	18.65
		Bank charges	25.38
		Sundries	88.06
			8362.22
Cash book balance 23/2/89	402.59	Cash book balance 22/3/90	1301.96
	$9664.18		$9664.18

ANZ COMMON FUND V2

Receipts		Payments	
Interest	1443.21	Transfer to cheque a/c	2000.00
		Bank charges	1.90
			2001.90
Fund balance at 23/2/89	9219.80	Fund balance at 22/2/90	8661.11
	$10663.01		$10663.01

Funds Statement - Year ended 22nd February, 1990

Funds balance at 23/2/89		$9622.39
Funds balance at 22/2/90		9963.07
Cash surplus 22/2/90		340.68
Less estimated current liabilities as per balance sheet:-		
Hall rental	40.00	
Rowick Printers - magazine	525.00	
Rowick Printers - printing of wetlands brochure	945.00	
Ken Jenkins Printer - Newsletters (5 Mths)	300.00	
Ken Jenkins Printer – Sick & Injured booklets	574.00	
Subscription paid in advance	211.00	
LESS payments in advance	2595.00	
		2545.00
Estimated deficit for year		$2204.32

Summary of Assets and Liabilities

Assets

Current Assets			
Bank Balances		9963.07	
Payments in advance		50.00	
Unsold publications		3987.70	
			14000.77
Non-Current Assets			
Furniture & equipment (at cost)			
Purchased in prior years	2270.35		
Purchased in current year	883.53		
		3153.88	
Library books (at valuation)		5000.00	
			8153.88
	TOTAL ASSETS		$22154.65
	Liabilities		
Current liabilities		2545.00	
Long term liabilities		Nil	
	TOTAL LIABILITIES		2545.00
Total Equity (excess of assets over liabilities)			$19609.65

Plant list excursion Carlisle River Grass-tree Plains area 22/4/90

Ferns

Blechnum wattsii	Hard-Water fern
Glenchenia dicarpa	Pouched Coral-fern
Lindsaea linearis	Screw-fern
Lycopodium deuteropdensum	Bushy Clubmoss
Pteridium esculentum	Austral Bracken
Schizaea asperula	Rough Comb-fern
Schizaea fistulosa	Narrow Comb-fern
Selaginella uliginosa	Swamp Selaginella

Flowering Plants

Acacia genistofolia	Spreading Wattle
Acacia mearnsii	Black Wattle
Acacia melanoxylon	Blackwood
Acacia mucronata	Narrow-leaf Wattle
Acacia myrtifolia	Myrtle Wattle

Acacia suaveolens	Sweet Wattle
Acacia verniciflua	Varnish Wattle
Acrotriche serrulata	Honey pots
Allocasuarina paludosa	Scrub She-oak
Amperea xiphoclada	Broom Spurge
Banksia marginata	Silver Banksia
Bauera rubioides	Wiry Bauera
Billardiera longifolia	Purple Appleberry
Bossiaea cinerea	Showy Bossiaea
Cassytha glabella	Slender Dodder laurel
Dillwynia glaberrima	Smooth Parrot-pea
Drossera pygmaea	Tiny Sundew
Empodisma minus	Spreading Rope-rush
Epacris impressa	Common Heath
Epacris lanuginosa	Wooly style Heath
Epacris obtusifolia	Blunt leaf Heath
Eriochilus cucullatus	Parsons Bands
Eucalyptus baxteri	Brown Stringybark
Gahnia sieberana	Red-fruit Saw-sedge
Gompholobium hueglii	Common Wedge pea
Gonocarpus tetragynus	Common Raspwort
Goodenia lanata	Trailing Goodenia
Goodenia ovata	Hop Goodenia
Gymnoschoenus sphaerocephalus	Button Grass
Hakea sericea	Bushy Hakea
Hakea ulicina	Furze Hakea
Helichrysum blandowskianum	Woolly Everlasting
Helichrysum rogersianum	Nummiong Everlasting
Hibbertia empetrifolia	Guinea flower
Hibbertia prostrata	Bundled Guinea flower
Hibbertia procumbens	Spreading Guinea flower
Ispogon ceratophyllus	Horny Cone-bush
Juncus pallidus	Pale rush
Kennedia prostrata	Running Postman
Lepidosperma laterale	Variable Sword sedge
Leptospermum juniperinum	Prickly Tea-tree
Leptospermum myrsinoides	Heath Tea-tree
Leucopogon australis	Spike Beard-heath
Lobelia alata	Angled Lobelia
Lomandra filiformis	Wattle Mat-rush
Melaleuca squarrosa	Scented Paper-bark
Monotoca glauca	Tree Broom heath
Olearia lirata	Snow Daisy bush
Olearia ramulosa	Twiggy Daisy bush
Olearia subullata	Daisy bush
Patersonia fragilis	Short Purple-flag
Persoonia juniperina	Prickly Geebung
Phebalium squameum	Satinwood
Pimelea humilis	Common Rice-Flower
Platylobium formosum	Handsome Flat-pea
Polyscias sambucifolius	Elderberry Panox
Pomaderris aspera	Rough Hazel Pomaderris
Pomaderris elachophylla	Small-leaf Pomaderris
Prostanthera lasianthus	Victorian Christmas Bush

Prostanthera mellissifolia	Balm Mint-bush
Pterostylis parviflora	Tiny Greenhood
Pultenaea daphnoides	Large leaf Bush pea
Pultenaea humilis	Dwarf Bush pea
Pultenaea prolifera	Otway Bush pea
Sprengelia incarnata	Pink Swamp Heath
Spyridium parvifolium	Australian Dusty Miller
Tetrarrhena distichophylla	Hairy Rice Grass
Tetratheca aliata	Pink Bells
Utricularia dicholoma	Common Fairies Apron
Utricularia lateritolia	Tiny Bladderwort
Viola hederacea	Ivy-leaf Violet
Xanthorrhoea australis	Austral Grass-tree
Xanthosia dissecta	Cut-leaf Xanthosia

Otway Black Snail
Photo: Trevor Pescott

For Juniors

Slugs and Snails

This group of animals may be found in the sea or on land. Periwinkles, abalones and limpets are first cousins to the snails and slugs we usually think of as garden pests. They all belong to the Class Gastropods. (Gastropod comes from the Greek *gastros,* stomach and *pous,* foot). Gastropods are the only molluscs which include species that have successfully adapted to land habitats.

The common garden snail *Helix aspera* is introduced. Australia has many land snail species, including the shining black Otway snail which is carnivorous, although most Australian snails are vegetable feeders. The tongue, or *radula,* moves backwards and forwards out of the mouth, and its teeth wear and are constantly replaced.

Snails are hermaphrodites; that is they carry both male and female sexual parts. Have you ever found snail eggs in the ground? Do you know how long they take to hatch? Or how long it takes a snail to reach its full size?

Watch a snail move. A series of wave-like muscular contractions in the underside of the foot causes it to creep slowly forward. What else helps it to move? What other animal moves on the ground with a wave-like motion?

How do snails locate their food?' By sight or by smell? How do they protect themselves? What do they look like when they are resting for long periods?

Slugs are like snails except that they have evolved a reduced shell, lost it altogether or internalised it. What are the advantages and disadvantages of having a shell?

See if you can find the answers to these questions, either in books or by observing snails and slugs. We'd like you to write to the Editor with your findings.

Errata

Vol. 27 No. 1 Page 7: Marty Loader should read Monty Loader.
Tony Puliafoto should read Tony Poliafito
Figures 2 and 3 should be reversed.

Gipsy Point Lodge

Situated at the head of beautiful Mallacoota Inlet and surrounded by Croajingolong National Park, the Lodge provides a relaxing, comfortable base from which to explore a unique, unspoiled area rich in bird life, flora and fauna. Package holidays for bird observers and field naturalists. Other activities include fishing, boating, swimming, surfing and bushwalking.

First class, all-inclusive accommodation in the Lodge or self-contained cottages.

For further details contact
Alan Robertson
Gipsy Point Lodge
Gipsy Point, Victoria 3891 Australia
Telephone: (051) 58 8205

SYLLABUS 1990/91

SEPTEMBER 1990

4 General meeting. David Corke. Making the film of the "Hopping Mouse" for the "Web of Life" series, and the You Yangs in the 40's"

8 Plant Group excursion. Inverleigh. Leader: Frances Poole (Ph: 211385)

9 Junior Group excursion. Brisbane Ranges - Wildflowers. Leader: Grant Baverstock (Ph: 817256)

11 Plant Group meeting. "Inverleigh Flora" - Frances Poole

16 Excursion. Fossils, crystals & gold, with Jack Myers in the Bacchus Marsh-Bullengarook areas. Leader: Graeme Tribe (Ph: 552302)

22/23 Boneseed Eradication & Birding at the You Yangs - Leader: Trevor Pescott (Ph: 434368)

25 Bird Group meeting. "Rare Waders" - Marilyn Hewish

OCTOBER

2 General meeting. Malcolm Gardner. "The Gellibrand, a valley under threat" and "The Platypus", its status in Western Victoria".

9 Plant group meeting. "Indigenous Species" - Leila Ramsay

21 Campout. "Bimbi Park" Cape Otway, Leaders: Roy Whiteside (Ph: 433279) & Ray Baverstock (Ph: 437025)

23 Bird Group meeting. "Birds of Barunah" - Gordon Cameron

26/28 W.V.F.N.C.A. Campout - The Grampians

NOVEMBER

3 Plant group excursion. Barwon Downs. Leader: Dick Southcombe (Ph: 433916)

6 General meeting. "Precious stones & minerals from near and far". Presented by Geelong Gem Club.

8 Thursday evening excursion - 6.30 p.m. The Birds around Deakin University. Leader: Margaret Cameron. 8.00 p.m. Vascular plants, a microscopic viewpoint with Stan Strother & Richard Reid at Deakin School of Science.

11 Junior Group excursion. Butterflies. Leader: Grant Baverstock (Ph: 817256)

13 Plant Group meeting. "Bellarine Railway Reserve Vegetation" - Diana Primrose

18 Excursion. Western Brisbane Ranges. Leaders: Cecily Lawrie (Ph: 434269) & Joyce Ward (Ph: 44-2899)

27 Bird group meeting. "Birds & Memories" - Gordon McCarthy

DECEMBER

4 General meeting. Members night.

11 Plant Group meeting. "Plant Propagation" - Glen Sago

JANUARY 1991

12 Evening excursion with Junior Group. Bat Trapping - Leader: Grant Baverstock (Ph: 817256)

22 Bird Group meeting, "Crows and Ravens"

26/28 Campout. Mt. Sabine. Leaders: Les Barrow (Ph: 443379) & Peter Williams (Ph: 213503)

SUBSCRIPTION RATES

Ordinary membership (inc. "Geelong Naturalist)	$16.00
Family/Joint membership (inc. "Geelong Naturalist"	$24.00
Jnr/Student membership (inc. "Geelong Naturalist")	$4.00
Corporate membership (clubs, organisations - inc. "Geelong Naturalist")	$25.00
Subscription to "Geelong Naturalist" only	$16.00
Newsletter posted on request	$8.00

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